

TECHNICAL DATA SHEET

18Ni300 Alloy Powder

Maraging Steel 300 / M300 / 1.2709 | 53-105 µm | Spherical Powder

1. Product Identification

Item	Description
Product Name	18Ni300 Alloy Powder
Alternative Designation	Maraging Steel 300 / M300 / 1.2709
Material	Fe-Ni-Co-Mo-Ti maraging steel alloy
Particle Size	53-105 µm
Morphology	Spherical powder
Manufacturing Route	Gas atomization
Lot Number	CSTB-260625B039 / As Received
Manufactured by	MetalsTek Engineering
Document Date	Jun. 29, 2026
Recommended Use	Additive manufacturing, powder metallurgy research, tooling and high-strength steel alloy applications

2. Chemical Composition

Element	Symbol	Content
Iron	Fe	Balance
Nickel	Ni	17.0-19.0 wt. %
Cobalt	Co	8.5-10.0 wt. %
Molybdenum	Mo	4.5-5.2 wt. %
Titanium	Ti	0.6-0.8 wt. %
Aluminum	Al	0.05-0.15 wt. %
Chromium	Cr	<0.50 wt. %

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Element	Symbol	Content
Carbon	C	<0.03 wt. %
Manganese	Mn	<0.10 wt. %
Silicon	Si	<0.10 wt. %
Phosphorus	P	<0.010 wt. %
Sulfur	S	<0.010 wt. %

3. Powder Specification

Item	Specification
Powder Type	Pre-alloyed maraging steel alloy powder
Particle Size Range	53-105 μm
Particle Shape	Spherical
Atomization Process	Gas atomization
Flowability	Suitable for powder-bed or powder-feeding processes when handled under proper dry conditions
Appearance	Gray metallic powder
Packaging	As supplied; keep sealed before use

4. Product Characteristics

- Fe-Ni-Co-Mo-Ti maraging steel alloy powder designed for high-strength steel applications.
- Gas atomized spherical morphology supports improved powder flow compared with irregular powder forms.
- Particle size of 53-105 μm is suitable for processes requiring a medium-to-coarse powder fraction.
- Nickel, cobalt, molybdenum and titanium are intentional alloying elements and should not be treated as impurities.

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5. Applications

- Additive manufacturing and metal powder research.
 - Tooling, mold inserts, dies and high-strength engineering parts.
 - Powder metallurgy and hot isostatic pressing research.
 - Repair, prototyping and development work involving maraging steel alloys.
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6. Handling and Storage

- Store in a cool, dry, clean and well-ventilated area.
 - Keep container tightly closed when not in use and protect from moisture.
 - Avoid dust generation and prevent accumulation of powder on surfaces.
 - Keep away from sparks, open flames, static discharge and incompatible chemicals.
 - Use appropriate personal protective equipment during handling and processing.
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7. Notes

- This TDS is prepared for 18Ni300 Alloy Powder, particle size 53-105 μm , lot CSTB-260625B039 / As Received.
- Final process suitability should be confirmed by the user according to equipment, powder handling practice and application requirements.
- For safety handling, storage, exposure control and disposal information, refer to the corresponding SDS.